

REMARKS

The present application was filed on April 14, 2004 with claims 1 through 20. Claims 1 through 20 are presently pending in the above-identified patent application.

In the Office Action, the Examiner rejected claims 1, 2, 10-12 and 19 under 5 U.S.C. §103(a) as being unpatentable over Ashley et al. (United States Patent Number 6,657,802). Claims 3 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ashley et al. in view of Reed (United States Patent Number 6,549,351). Claims 4, 5, 7, 14, 15, 17 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ashley et al. in view of Rezzi et al. (United States Patent Number 6,043,943). The Examiner indicated that 10 claims 6, 8, 9, 16, and 18 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Independent Claims 1, 11 and 19

Independent claims 1, 11, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ashley et al. Regarding claim 11, the Examiner asserts that Ashley et al. 15 disclose an apparatus for detecting data comprising an interpolator (228) adapted to generate one or more interpolated sample sequences from the data, wherein each interpolated sample sequence has a different corresponding phase relative to the data (col. 3, lines 25-35); and a detector (252) adapted to generate a distance measure between a portion of each interpolated sample sequence and an ideal sample sequence, (and) generate signal asymmetry (215) information for the portion 20 of each sample sequence (col. 4, lines 39-56).

The Examiner acknowledges that Ashley et al. do not explicitly show that an ideal sequence corresponds to peaks in the data. The Examiner asserts, however, that Ashley et al. show that data corresponds to digital pulses. The Examiner further asserts that it is known that digital pulses are converted from analog peaks using analog-to-digital converters (222).

25 The analog-to-digital converter 222 of Ashley et al. is processing the incoming signal, and not an ideal sample sequence. See, col. 3, lines 11-16. Further, an analog-to-digital converter merely converts an analog value to a digital code. The analog-to-digital converter, by itself, has no knowledge of the analog peaks. Applicants submit that a digital version of analog

peaks is not an “ideal sample sequence (that) corresponds to peaks in said data,” as required by each independent claim.

In addition, the Examiner has applied the distant metric calculator 252 (FIG. 3) of Ashley et al. as the element that generates a distance measure between the interpolated sampled sequence and the ideal sample sequence. The distant metric calculator 252 is a portion of the Sync. Detector 234 of FIG. 2. The Examiner has already asserted that the interpolated sampled sequence is generated by the interpolator 228 (FIG. 2) and it is the output of the ITR 228 that is the equalized signal processed by the distant metric calculator 252.

While the analog signal generated by the ADC 222 may be processed by the FIR 224 and ITR 228 to generate the equalized signal, the “equalized signal” and “phase estimate signal” processed by the distant metric calculator 252 are not an “ideal sequence correspond(ing) to peaks in the data,” as required by each independent claim.

Independent claims 1, 11, and 19 require wherein the ideal sample sequence *corresponds to peaks in the data*. Thus, Ashley et al. do not disclose or suggest wherein the ideal sample sequence corresponds to peaks in the data, as required by independent claims 1, 11, and 19.

Additional Cited References

Reed was also cited by the Examiner for its disclosure of a device for data detection wherein peaks are used to detect RRO marks (i.e. RRO bit) for the purpose of compensating for repeatable run-out (col. 5, lines 24-44). Reed, however, does not disclose or suggest that the ideal sample sequence *corresponds to peaks in the data*.

Rezzi et al. was cited by the Examiner for its disclosure of asymmetry correction. Rezzi et al. does not disclose or suggest an ideal sample sequence *corresponding to peaks in the data*.

Thus, Reed and Rezzi et al. do not disclose or suggest wherein the ideal sample sequence corresponds to peaks in the data, as required by independent claims 1, 11, and 19.

Dependent Claims 2-10, 12-18 and 20

Claims 2-10, 12-18, and 20 are dependent on claims 1, 11, and 19, respectively, and are therefore patentably distinguished over Ashley et al., Reed and/or Rezzi et al. (alone or

in any combination) because of their dependency from independent claims 1, 11, and 19 for the reasons set forth above, as well as other elements these claims add in combination to their base claim. The Examiner has already indicated that claims 6, 8, 9, 16, and 18 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

All of the pending claims, i.e., claims 1-20, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



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Kevin M. Mason
Attorney for Applicants
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06824
(203) 255-6560